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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/995,470

11/28/2001

David Canard

FR 000127

2289

24737

7590

08/11/2004

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

NGUYEN, HAI L

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/995,470

**Applicant(s)**

CANARD ET AL

**Examiner**

Hai L. Nguyen

**Art Unit**

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 July 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendment received on 06/16/04 has been reviewed and considered with the following results:

As to the prior art rejections to the claims made in the previous Office Action are now withdrawn in view of Applicant's amendments. However, Applicant's amendments necessitate new ground of rejection as set forth below.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the lowpass filter (in claims 1, 4, and 6) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted

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by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quigley et al. (US 5,825,640; previously cited) in view of Ziegler et al. (US 5,877,641; previously cited) and further in view of Mizuno et al. (US 6,608,509).

With regard to claims 1, 2, and 7, Quigley et al. discloses in Figs.1-3 a device, and a method of use thereof, for comparison, including a phase/frequency comparator (24), which is designed to receive a first input signal (VREF) and second input signal (VLO); at least two current sources (32, 34), each of which is designed to emit a charge current; and a capacitive element (29), which is designed to have the charge current pass through it, and to generate the control signal (VCONTROL); where the phase/frequency comparator is designed such that the first regulation signal comprises a succession of pulses, each of which has a width which is modulated according to the frequency difference which exists between the first and second input signals. Figs.2-3 of Quigley et al. shows a device meeting all of the claimed limitations of the claims except for the phase/frequency comparator emit two regulation signals (UP, DOWN) instead of one regulation signal as recited in the claims and a lowpass filter. Ziegler et al.

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teaches in Fig.8 a comparator including a flip-flop RS (38) connected to regulation signals (UP, DOWN) for emitting a single regulation signal (Q) to control the charge currents of the two current sources. Therefore, it would have been obvious to one of ordinary skill in the art to implement either the comparator (Fig.8) or a RS flip-flop (38) taught by Ziegler et al. with the prior art (Figs.2-3 of Quigley et al.) in order to prevent the non-determine state when the two input signals (VREF, VLO) are negative-going in coincidence. Furthermore, Mizuno et al. teaches in Fig.4 a lowpass filter (LPF1) responsive to the first regulation of a phase/frequency comparator (PFD1) for producing a filtered first regulation signal (S3) as recited in the claim. Therefore, it would have been obvious to one of ordinary skill in the art to implement the lowpass filter taught by Mizuno et al. with the prior art (Figs.2-3 of Quigley et al.) in order to prevent unwanted noise from the output signal of the phase/frequency comparator.

With regard to claim 3, the phase/frequency comparator includes a first (52) and a second detector (54) for active edges of the first and second input signals respectively, the outputs of which are connected to the inputs for setting to one and to zero of flip-flop RS; and means (RESET, 40, 42, 56s, 58s, 60, 62, 66, 68) for re-initialization of the first and second detectors, which are designed to deactivate one or the other of the detectors, when the active edge which it has detected has been taken into account by the flip-flop RS.

Claims 4 and 6 are rejected for similar motivation. Note the above discussion with regard to claims 1, 2, and 7.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Quigley et al. in view of Ziegler et al. and Mizuno et al., as applied to claim 4 above, and further in view of Ninomiya (US 6,512,801; previously cited).

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The above-discussed circuit of the prior arts meets all of the claimed limitations except for a programmable divider (DIV in instant Fig. 1 of present application). Ninomiya teaches in Fig. 1 a circuit comprising a programmable divider (21), which is inserted between the oscillator (11) and the device (23, 25) for comparison as recited in claim 5. Therefore, it would have been obvious to one of ordinary skill in the art to implement the programmable divider taught by Ninomiya with the prior art (Fig. 2 of Quigley et al.) in order to set a dividing ratio with which the oscillator (22) can generate the output signal (VLO) with any frequency, within the range of the circuit, to meet the specific frequency of the particular application.

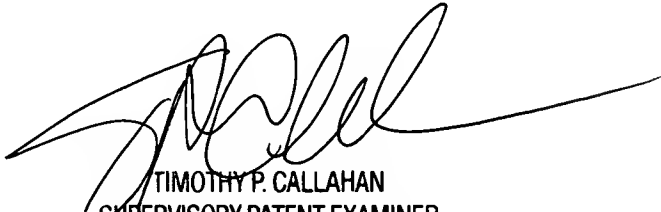
### *Conclusion*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai L. Nguyen whose telephone number is 571-272-1747 and Right Fax number is 571-273-1747. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The official fax phone number for the organization where this application or proceeding is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1562.

HLN   
August 1, 2004

  
TIMOTHY P. CALLAHAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800